

# Women outperform men when identifying emotions

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Women are better than men at distinguishing between emotions, especially fear and disgust, according to a new study published in the online version of the journal *Neuropsychologia*.

As part of the investigation, Olivier Collignon and a team from the Université de Montréal Centre de recherche en neuropsychologie et cognition (CERNEC) demonstrated that women are better than [men](#) at processing auditory, visual and audiovisual emotions.

While women have long been thought to outperform men in neuropsychological tests, until now, these findings were inconsistent. To obtain more conclusive evidence, the Université de Montréal researchers did not use photographs to analyze the reaction of subjects. Instead, the scientists hired actors and actresses to simulate [fear](#) and disgust.

"Facial movements have been shown to play an important role in the perception of an emotion's intensity as well as stimulate different parts of the brain used in the treatment of such information," says Collignon, who also works as a researcher at the Université catholique de Louvain's Institute of Neuroscience in Belgium.

## Categorizing emotions

As part of their study, the research team exposed subjects to bimodal stimuli or the facial expressions of live actors combined with recordings

of human emotions. Twenty-three men and 23 women, aged 18 to 43, were tested and none had any recorded history of neurological or psychiatric problems.

Participants were asked to quickly categorize emotions they identified as fear or disgust. Emotions were based on auditory stimuli, visual stimuli, followed by compatible audio-visual stimuli and contradictory audio-visual stimuli (i.e. a face that expressed fear with a voice that expressed disgust).

The study found that women were superior in completing assessments and responded quicker when emotions were portrayed by a female rather than a male actor. Compared to men, women were faster at processing facial and multisensory expressions.

## **Why fear and disgust?**

The research team studied fear and [disgust](#) because both emotions have a protective, evolutionary history. Simply put, these emotions are more important for survival of the species than other emotions such as joy.

"The aim of such a study isn't to prove the superiority of men or women - contrarily to what some people believe," says Collignon. "These gender studies are necessary for researchers to better understand mental diseases which have a strong gender component. That means they affect men and women differently. Autism is a good example, because it affects more men than women and one of its features is the difficulty in recognizing emotions."

## **Autism and emotions**

In 2002, researchers Baron and Cohen put forth a controversial theory

stipulating that autism and Asperger's syndrome are an extreme in male interpersonal behavior that's characterized by impaired empathy and enhanced systematizing. "Seeing as our results show that men identify and express emotions less efficiently than women, it supports this theory to a certain extent," says Collignon.

## Differences between men and women

Are [women](#) natured or nurtured to be different? Biology may play a role, since there are few opportunities for socialization to shape such gender differences. Evolutionary psychologists have suggested that females, because of their role as primary caretakers, are wired to quickly and accurately decode or detect distress in preverbal infants or threatening signals from other adults to enhance their chances at survival.

"However, these studies should not rule out the fact that culture and socialization do play a powerful role in determining gender differences in the processing of [emotional](#) expressions," says Collignon.

More information: Neuropsychologia: [www.elsevier.com/wps/find/journaldescription.cription#description](http://www.elsevier.com/wps/find/journaldescription.cription#description)

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